


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 732-36E		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> EOG Resources, Inc.				<b>7. OPERATOR PHONE</b> 435 781-9111		
<b>8. ADDRESS OF OPERATOR</b> 1060 East Highway 40, Vernal, UT, 84078				<b>9. OPERATOR E-MAIL</b> kaylene_gardner@eogresources.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> ML-3140.5		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	1905 FNL 661 FWL	SWNW	36	9.0 S	20.0 E	S
<b>Top of Uppermost Producing Zone</b>	1905 FNL 661 FWL	SWNW	36	9.0 S	20.0 E	S
<b>At Total Depth</b>	1905 FNL 661 FWL	SWNW	36	9.0 S	20.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 661		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 280		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 1360		<b>26. PROPOSED DEPTH</b> MD: 7055 TVD: 7055		
<b>27. ELEVATION - GROUND LEVEL</b> 4901		<b>28. BOND NUMBER</b> 6196017		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 49-225		
<b>ATTACHMENTS</b>						
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>						
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER			<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)			<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)			<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
<b>NAME</b> Kaylene Gardner		<b>TITLE</b> Regulatory Administrator		<b>PHONE</b> 435 781-9111		
<b>SIGNATURE</b>		<b>DATE</b> 12/24/2008		<b>EMAIL</b> kaylene_gardner@eogresources.com		
<b>API NUMBER ASSIGNED</b> 43047500600000		<b>APPROVAL</b>  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Cond	17.5	13.378	0	60		
Pipe	Grade	Length	Weight			
	Grade H-40 ST&C	60	48.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	60			
		Cement Description	Class	Sacks	Yield	Weight
			Class C Cement	0	0.0	0.0

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2300		
Pipe	Grade	Length	Weight			
	Grade J-55 ST&C	2300	36.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2300			
		Cement Description	Class	Sacks	Yield	Weight
			Class G Cement	185	3.82	11.0

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	7055		
Pipe	Grade	Length	Weight			
	Grade N-80 LT&C	7055	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		2300	7055			
		Cement Description	Class	Sacks	Yield	Weight
			Hi Lift "G"	152	3.91	11.0
			50/50 Poz	439	1.28	14.1

**EIGHT POINT PLAN**

**NATURAL BUTTES UNIT 732-36E**  
**SW/NW, SEC. 36, T9S, R20E, S.L.B.&M..**  
**UINTAH COUNTY, UTAH**

**1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:**

FORMATION	TVD-RKB (ft)	Objective	Lithology	
Green River	1,571		Shale	
Mahogany Oil Shale Bed	2,346		Shale	
Wasatch	5,023	Primary	Sandstone	Gas
Chapita Wells	5,692	Primary	Sandstone	Gas
Buck Canyon	6,384	Primary	Sandstone	Gas
North Horn	6,995	Primary	Sandstone	Gas
<b>TD</b>	<b>7,055</b>			

Estimated TD: **7,055' or 200'± below TD**

**Anticipated BHP: 3,852 Psig**

- Fresh Waters may exist in the upper, approximately 1,000 ft ± of the Green River Formation, with top at about 2,000 ft ±.
- Cement isolation is installed to surface of the well isolating all zones by cement.

**3. PRESSURE CONTROL EQUIPMENT:**

Production Hole – 5000 Psig  
 BOP schematic diagrams attached.

**4. CASING PROGRAM:**

CASING	Hole Size	Length	Size	WEIGHT	Grade	Thread	Rating Collapse	Factor Burst	Tensile
Conductor	17 1/2"	0 – 60'	13 3/8"	48.0#	H-40	STC	770 PSI	1730 PSI	322,000#
Surface	12 1/4"	0' – 2,300' KB±	9-5/8"	36.0#	J-55	STC	2020 PSI	3520 Psi	394,000#
Production	7-7/8"	Surface – TD	4-1/2"	11.6#	N-80	LTC	6350 PSI	7780 Psi	233,000#

**Note:** 12-1/4" surface hole will be drilled to a total depth of 200'± below the base of the Green River lost circulation zone and cased w/9-5/8" as shown to that depth. Drilled depth may be shallower or deeper than the 2300' shown above depending on the actual depth of the loss zone.

**All casing will be new or inspected.**

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**UINTAH COUNTY, UTAH**

**5. Float Equipment:**

**Surface Hole Procedure (0' - 2300'±)**

Guide Shoe

Insert Float Collar (PDC drillable)

Centralizers: 1-5' above shoe, top of jts. #2 and #3 then every 5<sup>th</sup> joint to surface. (15 total)

**Production Hole Procedure (2300'± - TD):**

Float shoe, 1 joint casing, float collar and balance of casing to surface. 4-1/2", 11.6#, N-80 or equivalent marker collars or short casing joints to be placed at top of Price River and 400' above top of Wasatch. Centralizers to be placed 5' above shoe on joint #1, top of joint #2, and every 2nd joint to 400' above Wasatch Island top. Thread lock float shoe, top and bottom of float collar, and top of 2<sup>nd</sup> joint.

**6. MUD PROGRAM**

**Surface Hole Procedure (Surface - 2300'±):**

Air/air mist or aerated water.

**Production Hole Procedure (2300'± - TD):** Anticipated mud weight 9.5 – 10.5 ppg depending on actual wellbore conditions encountered while drilling.

**2300'± - TD** A closed mud system will be utilized. A bentonite gelled water mud system will be used to control viscosity w/PHPA polymer used for supplemental viscosity and clay encapsulation/inhibition. Water loss will be maintained at <15cc's using white starch or PAC. Bactericides will be used as needed. Anticipated pH will range from 9.0-10.0. Mud weight will be adjusted as necessary for well control. Deflocculants/thinners will be used as necessary to maintain mud quality. LCM sweeps will be utilized as necessary to control lost circulation and mud loss. CO2 contamination, if encountered, will be treated with lime and gypsum.

**EIGHT POINT PLAN**

**NATURAL BUTTES UNIT 732-36E**  
**SW/NW, SEC. 36, T9S, R20E, S.L.B.&M..**  
**UINTAH COUNTY, UTAH**

**1. VARIANCE REQUESTS:**

**Reference:**    **Onshore Oil and Gas Order No. 1**  
                      **Onshore Oil and Gas Order No. 2 – Section E: Special Drilling Operations**

- EOG Resources, Inc. requests a variance to regulations requiring a straight run blooie line to be 100' in length. (Where possible, a straight run blooie line will be used).
- EOG Resources, Inc. requests a variance to regulations requiring the blooie line to be 100' in length. To reduce location excavation, the blooie line will be approximately 75' in length.
- EOG Resources, Inc. requests a variance to regulations, during air drilling operations only, requiring dedusting equipment. Dust during air drilling operations is controlled by water mist.
- EOG Resources, Inc. requests a variance to regulations, during air drilling operations only, requiring an automatic igniter or continuous pilot light on the blooie line. (Not required on aerated water system).
- EOG Resources, Inc. requests a variance that compressors are located in the opposite direction from the blooie line a minimum of 100 feet from the well bore. (Air Compressors are rig mounted).

**8. EVALUATION PROGRAM:**

**Logs:**                               Mud log from base of surface casing to TD.  
**Cased-hole Logs:**           Cased-hole logs will be run in lieu of open-hole logs consisting of the following:  
                                      **Cement Bond / Casing Collar Locator and Pulsed Neutron**

**EIGHT POINT PLAN**

**NATURAL BUTTES UNIT 732-36E**  
**SW/NW, SEC. 36, T9S, R20E, S.L.B.&M..**  
**UINTAH COUNTY, UTAH**

**9. CEMENT PROGRAM:**

**Surface Hole Procedure (Surface - 2300'±):**

**Lead:**     **185 sks** Class "G" cement with 16% Gel, 10 #/sx Gilsonite, 3% Salt, 2% CaCl<sub>2</sub>, 3 lb/sx GR3 ¼ #/sx Flocele mixed at 11 ppg, 3.82 ft<sup>3</sup>/sk. yield, 23 gps water.

**Tail:**     **207 sks** Class "G" cement with 2% CaCl<sub>2</sub>, ¼#/sk Flocele mixed at 15.6 ppg, 1.18 ft<sup>3</sup>/sk., 5.2 gps water.

**Top Out:** As necessary with Class "G" cement with 2% CaCl<sub>2</sub>, ¼#/sk Flocele mixed at 15.6 ppg, 1.18 ft<sup>3</sup>/sk., 5.2 gps water.

**Note:**     Cement volumes will be calculated to bring lead cement to surface and tail cement to 500' above the casing shoe.

**Production Hole Procedure (2300'± - TD)**

**Lead:**     **152 sks:** Hi-Lift "G" w/12% D20 (Bentonite), 1% D79 (Extender), 5% D44 (Salt), 0.2% D46 (Antifoam), 0.25% D112 (Fluid Loss Additive), 0.25 pps D29 (cello flakes) mixed at 11.0 ppg, 3.91 ft<sup>3</sup>/sk., 24.5 gps water.

**Tail:**     **439 sks:** 50:50 Poz "G" w/ 2% D20 (Bentonite), 0.1% D46 (Antifoam), 0.075% D13 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant), mixed at 14.1 ppg, 1.28 ft<sup>3</sup>/sk., 5.9gps water.

**Note:**     The above number of sacks is based on gauge-hole calculation.  
Lead volume to be calculated to bring cement to 200'± above 9-5/8" casing shoe.  
Tail volume to be calculated to bring cement to 400'± above top of Wasatch.

**Final Cement volumes will be based upon gauge-hole plus 45% excess.**

**10. ABNORMAL CONDITIONS:**

**Surface Hole (Surface - 2300'±):**

Lost circulation

**Production Hole (2300'± - TD):**

Sloughing shales, lost circulation and key seat development are possible in the Wasatch Formation.

**EIGHT POINT PLAN**

**NATURAL BUTTES UNIT 732-36E**  
**SW/NW, SEC. 36, T9S, R20E, S.L.B.&M..**  
**UINTAH COUNTY, UTAH**

**11. STANDARD REQUIRED EQUIPMENT:**

- A. Choke Manifold
- B. Upper and Lower Kelly Cock
- C. Stabbing Valve
- D. Visual Mud Monitoring

**12. HAZARDOUS CHEMICALS:**

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

**13. Air Drilling Operations:**

- 1. Main Air Compressors are 1250 CFM 350 psi with 2000 psi Boosters and are rig mounted.
- 2. Secondary Air Compressors are 1170 CFM 350 psi with 2000 psi Boosters and are rig mounted.
- 3. Minimum setting depth of conductor casing will be 60' GL or 10'± into competent formation, whichever is deeper, as determined by the EOG person in charge. Exceptions must be approved by an EOG drilling superintendent or manager.
- 4. The diameter of the diverter flow line will be a minimum of 10" to help reduce back pressure on the well bore during uncontrolled flow.
- 5. Rat and Mouse hole drilling will occur only after surface casing has been set and cemented.
- 6. EOG Resources, Inc. will use a properly maintained and lubricated stripper head.

(Attachment: BOP Schematic Diagram)

T9S, R20E, S.L.B.&M.

EOG RESOURCES, INC.

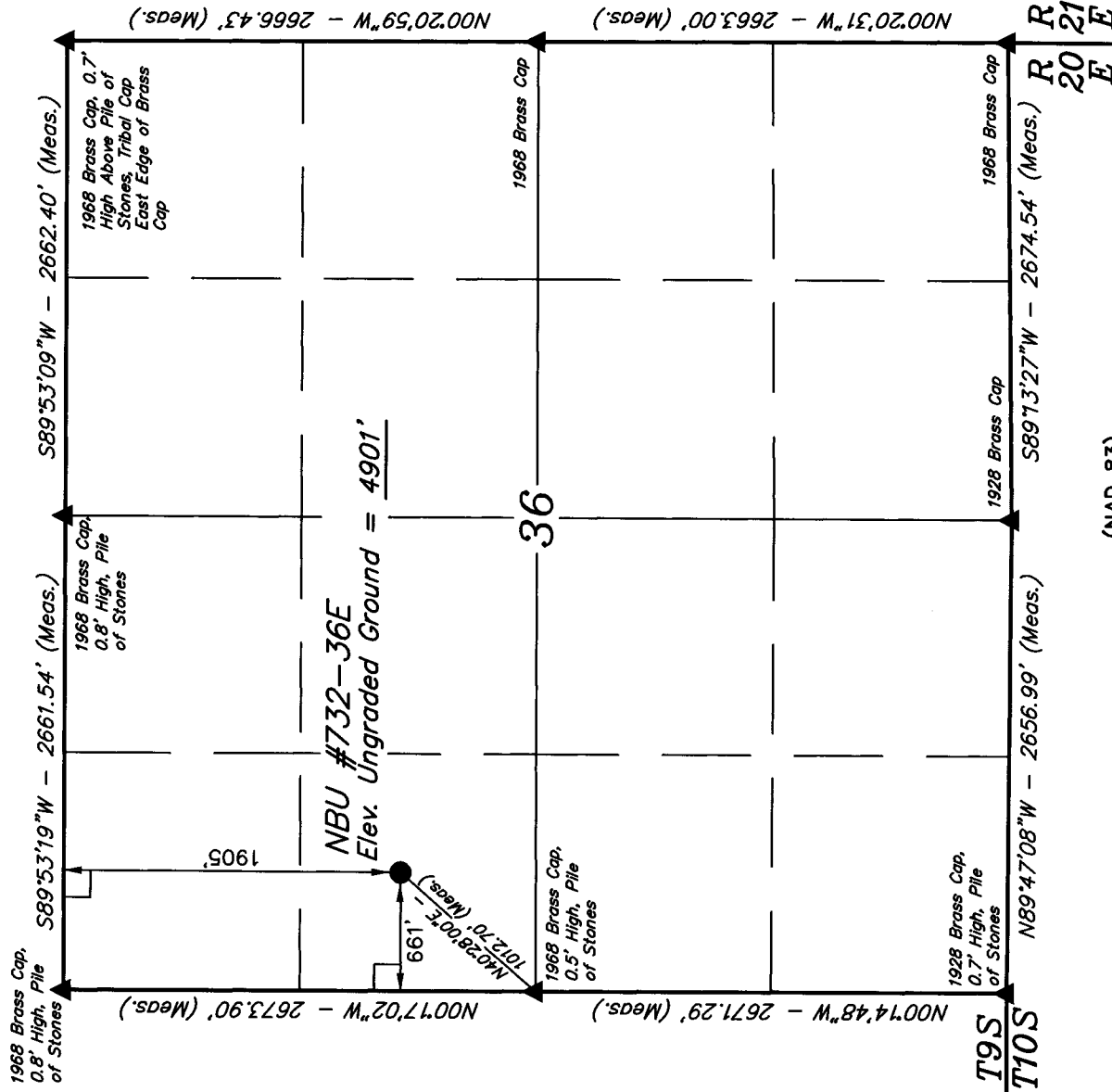
Well location, NBU 732-36E, located as shown in the SW 1/4 NW 1/4 of Section 36, T9S, R20E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



### LEGEND:

— = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(NAD 83)  
LATITUDE = 39°59'36.72" (39.993533)  
LONGITUDE = 109°37'17.85" (109.621625)  
(NAD 27)  
LATITUDE = 39°59'36.85" (39.993569)  
LONGITUDE = 109°37'15.36" (109.620933)

1000'  
500'  
0'  
500'  
1000'

SCALE

CERTIFIED LAND SURVEYOR

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEY MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ROBERT L. ROBERTS  
REGISTERED LAND SURVEYOR  
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 03-18-08	DATE DRAWN: 03-21-08
PARTY C.R. C.M. C.N.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE	EOG RESOURCES, INC.

**EOG RESOURCES, INC.**  
**NBU #732-36E**  
**SECTION 36, T9S, R20E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 6.9 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 2.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 0.4 MILES TO THE JUNCTION OF THIS ROAD AND AN PROPOSED ROAD FOR THE 730-36E TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 0.1 TO THE BEGINNING OF THE PROPOSED ACCESS FOR TO THE NORTH; FOLLOW ROAD FLAGS IN A NORHTERLY DIRECTION APPROXIMATLEY 0.1 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 40.6 MILES.

T9S, R20E, S.L.B.&M.

EOG RESOURCES, INC.

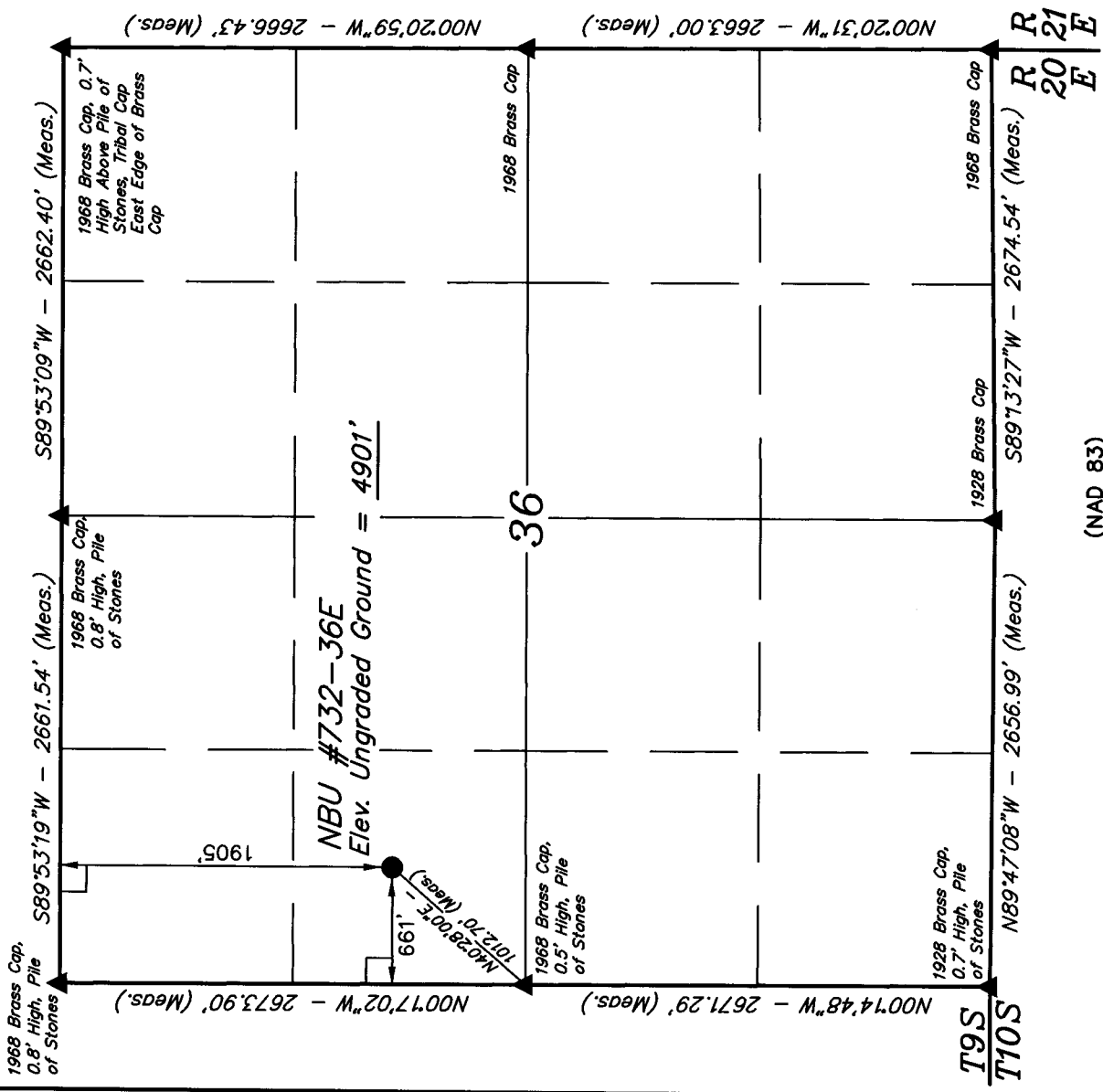
Well location, NBU 732-36E, located as shown in the SW 1/4 NW 1/4 of Section 36, T9S, R20E, S.L.B.&M., Uintah County, Utah.

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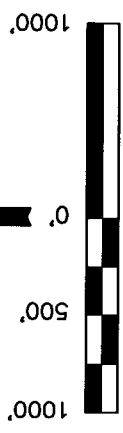
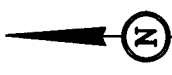
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- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

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85 SOUTH 200 EAST - VERNAL, UTAH 84078  
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SCALE 1" = 1000'	DATE SURVEYED: 03-18-08	DATE DRAWN: 03-21-08
PARTY C.R. C.M. C.N.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE	EOG RESOURCES, INC.

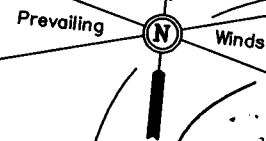
# EOG RESOURCES, INC.

## LOCATION LAYOUT FOR

NBU #732-36E

SECTION 36, T9S, R20E, S.L.B.&M.

FIGURE #1



F-4.0'  
El. 4895.7'

1905' FNL

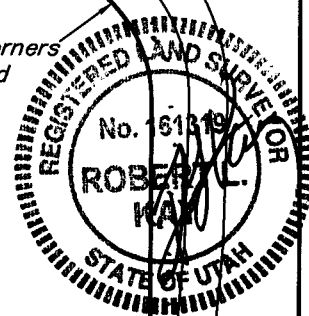
661' FWL

MAXIMUM DISTURBANCE AREA

F-7.0'  
El. 4892.7'

SCALE: 1" = 50'  
DATE: 03-21-08  
Drawn By: C.N.

NOTE:  
Flare Pit is to  
be located a min.  
of 100' from the  
Well Head.



Round Corners  
as needed

Approx.  
Toe of  
Fill Slope

C-12.7'  
El. 4900.4'  
(btm. pit)

Reserve Pit Backfill  
& Spoils Stockpile

Approx.  
Top of  
Cut Slope

C-16.2'  
El. 4903.9'  
(btm. pit)

15' WIDE BENCH

RESERVE PITS  
(12' Deep)

Total Pit Capacity  
W/2' of Freeboard  
= 14,950 Bbls.±  
Total Pit Volume  
= 4,030 Cu. Yds

1:1 1/2 SLOPE

20' WIDE BENCH

C-1.7'  
El. 4901.4'

C-1.7'  
El. 4901.4'

RIG DOG HOUSE

MUD TANKS

WATER

PUMP

MUD SHED

HOPPER

POWER

TOOLS

FUEL

TRASH

TOILET

FUEL

Sta. 0+50

STORAGE TANK

C-6.1'  
El. 4905.8'

Sta. 0+00

C-5.6'  
El. 4905.3'

C-1.3'  
El. 4901.0'

Proposed Access  
Road

Elev. Ungraded Ground at Location Stake = 4901.4'  
Elev. Graded Ground at Location Stake = 4899.7'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

**EOG RESOURCES, INC.**

**TYPICAL CROSS SECTIONS FOR**

**NBU #732-36E**

**SECTION 36, T9S, R20E, S.L.B.&M.**

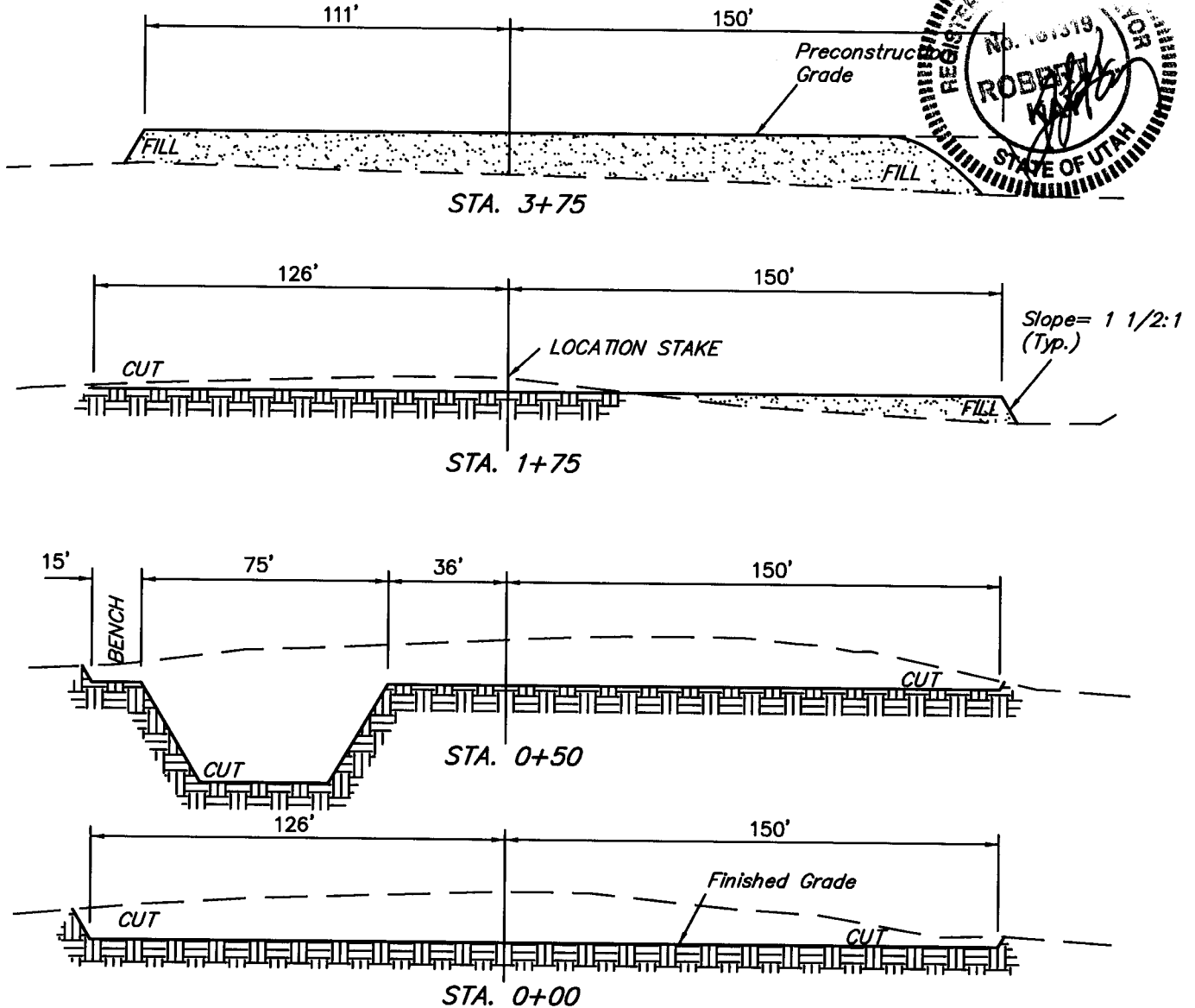
**1905' FNL 661' FWL**

**FIGURE #2**

DATE: 03-21-08

Drawn By: C.N.

X-Section  
Scale  
1" = 20'  
1" = 50'



**APPROXIMATE ACREAGES**

**NOTE:**

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

WELL SITE DISTURBANCE = ± 2.965 ACRES

PIPELINE DISTURBANCE = ± 0.809 ACRES

ACCESS ROAD DISTURBANCE = ± 0.344 ACRES

TOTAL = ± 4.116 ACRES

**\* NOTE:**

FILL QUANTITY INCLUDES 5% FOR COMPACTION

**APPROXIMATE YARDAGES**

(6") Topsoil Stripping = 2090 Cu. Yds.

Remaining Location = 9840 Cu. Yds.

TOTAL CUT = 11930 CU. YDS.

FILL = 7830 CU. YDS.

EXCESS MATERIAL = 4100 Cu. Yds.

Topsoil & Pit Backfill (1/2 Pit Vol.) = 4100 Cu. Yds.

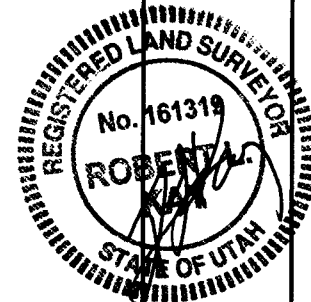
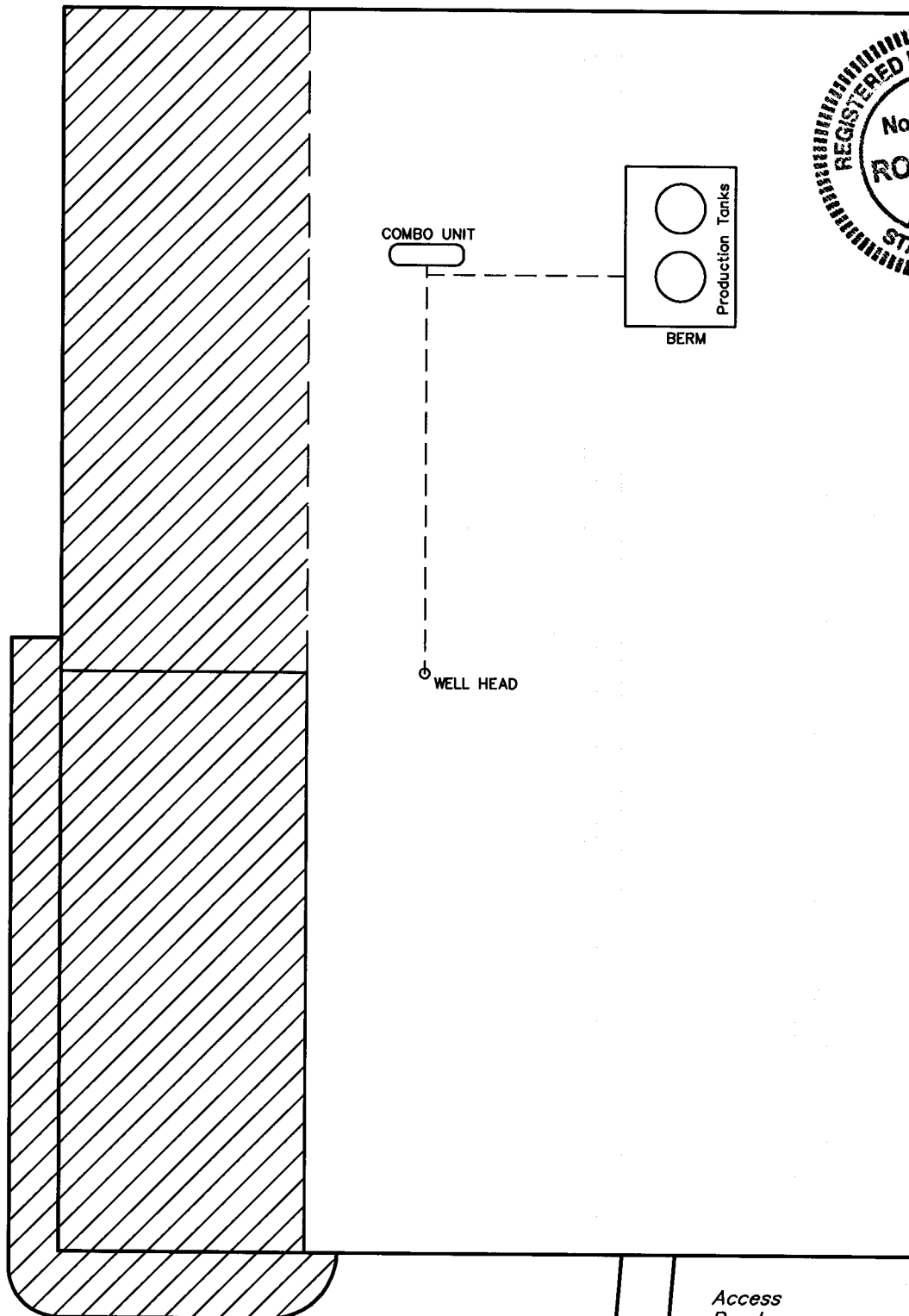
EXCESS UNBALANCE (After Interim Rehabilitation) = 0 Cu. Yds.

**UINTAH ENGINEERING & LAND SURVEYING**  
86 So. 200 East \* Vernal, Utah 84078 \* (435) 788-1017



**EOG RESOURCES, INC.**  
**PRODUCTION FACILITY LAYOUT FOR**  
NBU #732-36E  
SECTION 36, T9S, R20E, S.L.B.&M.  
1905' FNL 661' FWL

**FIGURE #3**  
DATE: 03-21-08  
Drawn By: C.N.



 RE-HABED AREA

**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

# EOG RESOURCES, INC.

**NBU #732-36E**

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 36, T9S, R20E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHEASTERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

**LOCATION PHOTOS**

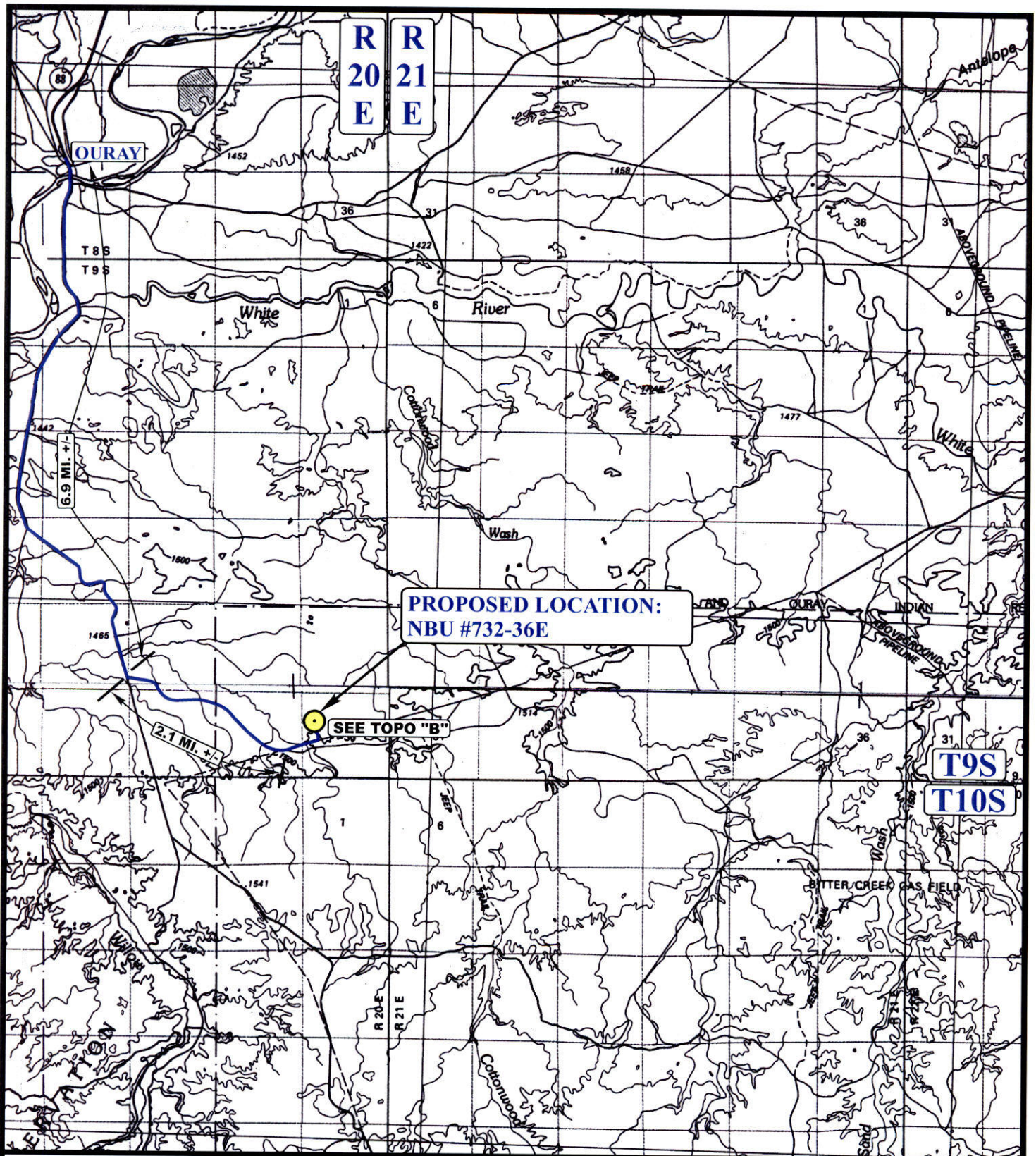
**03** **24** **08**  
MONTH DAY YEAR

**PHOTO**

TAKEN BY: C.R.

DRAWN BY: C.N.

REVISED: 00-00-00



**LEGEND:**

 **PROPOSED LOCATION**

**EOG RESOURCES, INC.**

**NBU #732-36E**  
**SECTION 36, T9S, R20E, S.L.B.&M.**  
**1905' FNL 661' FWL**



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

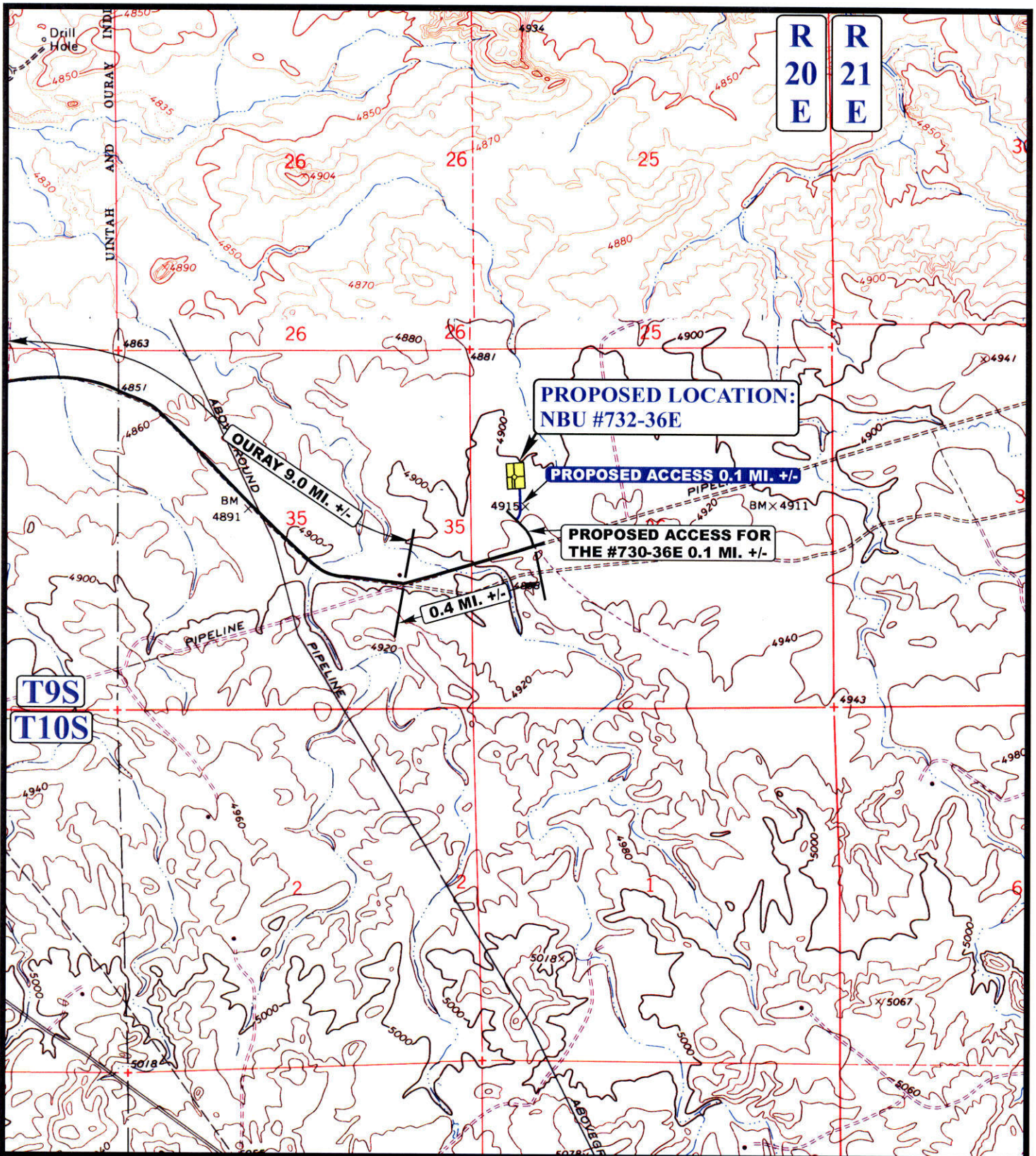


**TOPOGRAPHIC**  
**MAP**

**03 24 08**  
 MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: C.N. REVISED: 00-00-00





**LEGEND:**

— EXISTING ROAD  
 - - - PROPOSED ACCESS ROAD

**EOG RESOURCES, INC.**

**NBU #732-36E**  
**SECTION 36, T9S, R20E, S.L.B.&M.**  
**1905' FNL 661' FWL**



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC**  
**MAP**

**03 24 08**  
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.N. REVISED: 00-00-00

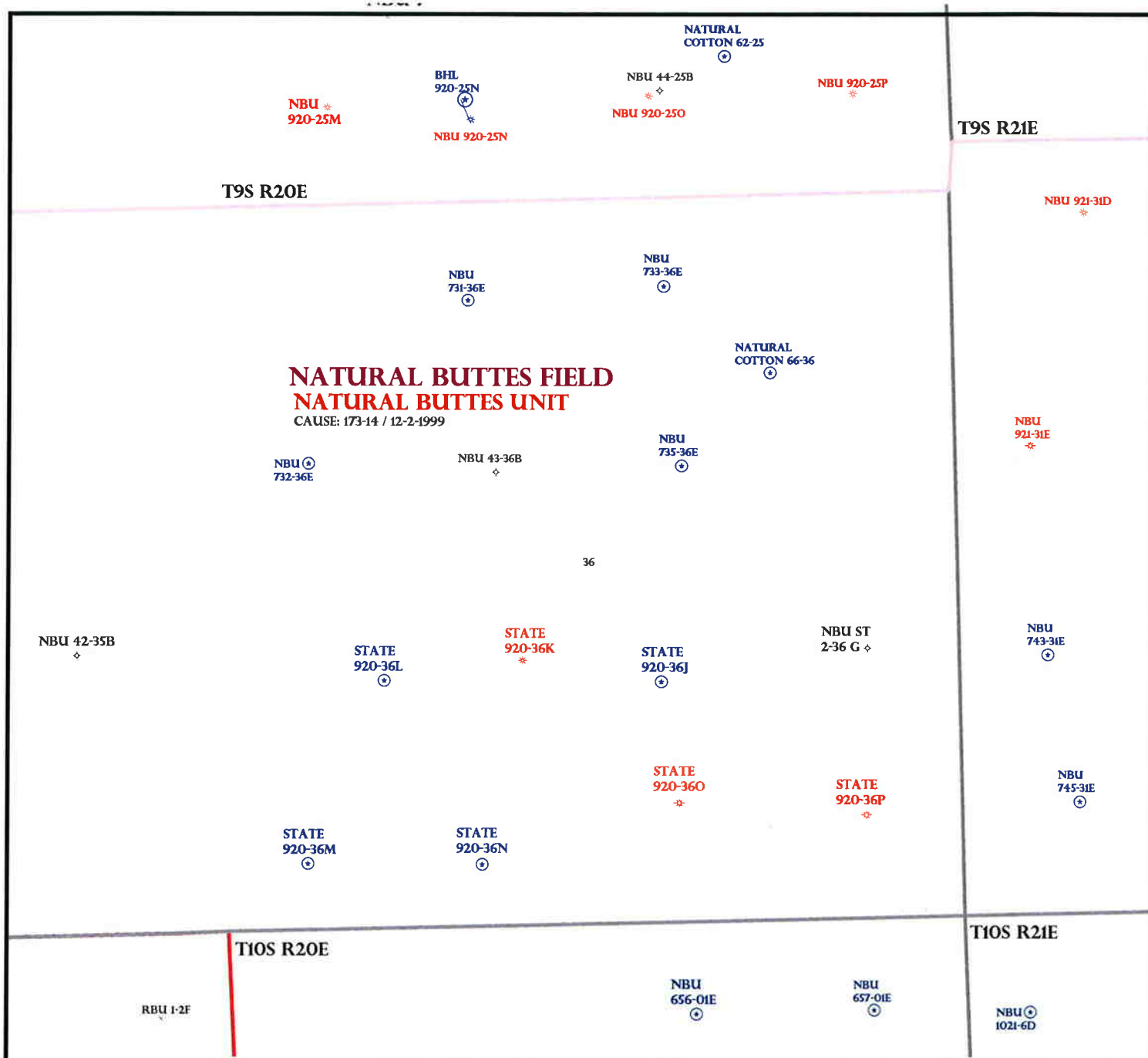




TOPOGRAPHIC MAP		03 MONTH	24 DAY	08 YEAR
SCALE: 1" = 2000'	DRAWN BY: C.N.	REVISED: 00-00-00		

C  
TOPO

D  
TOPO



OPERATOR: EOG RESOURCES INC (N9550)

SEC: 36 T.9S R. 20E

FIELD: NATURAL BUTTES (630)

COUNTY: UINTAH

CAUSE: 173-14 / 12-2-1999

**Field Status**  
 [ ] ABANDONED  
 [ ] ACTIVE  
 [ ] COMBINED  
 [ ] INACTIVE  
 [ ] PROPOSED  
 [ ] STORAGE  
 [ ] TERMINATED

**Unit Status**  
 [ ] EXPLORATORY  
 [ ] GAS STORAGE  
 [ ] NF PP OIL  
 [ ] NF SECONDARY  
 [ ] PENDING  
 [ ] PI OIL  
 [ ] PP GAS  
 [ ] PP GEOTHERML  
 [ ] PP OIL  
 [ ] SECONDARY  
 [ ] TERMINATED

**Wells Status**

[ ] GAS INJECTION  
 [ ] GAS STORAGE  
 [ ] LOCATION ABANDONED  
 [ ] NEW LOCATION  
 [ ] PLUGGED & ABANDONED  
 [ ] PRODUCING GAS  
 [ ] PRODUCING OIL  
 [ ] SHUT-IN GAS  
 [ ] SHUT-IN OIL  
 [ ] TEMP. ABANDONED  
 [ ] TEST WELL  
 [ ] WATER INJECTION  
 [ ] WATER SUPPLY  
 [ ] WATER DISPOSAL  
 [ ] DRILLING



PREPARED BY: DIANA MASON  
 DATE: 27-JUNE-2008

# Application for Permit to Drill Statement of Basis

12/24/2008

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
840	43047500600000	InReview	GW	S	No
<b>Operator</b>	EOG RESOURCES, INC.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 732-36E		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	SWNW 36 9S 20E S 1905 FNL 661 FWL GPS Coord (UTM) 617726E 4427736N				

## Geologic Statement of Basis

EOG proposes to set 2,300' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,700'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 36 . The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought to above the base of the moderately saline groundwater in order to isolate it from fresher waters uphole The proposed casing and cement program should adequately protect usable ground water in the area.

Brad Hill  
APD Evaluator

8/12/2008  
Date / Time

## Surface Statement of Basis

This location is in the Natural Buttes Unit approximately 10 miles southeast of Ouray, Ut.. It is accessed by the Seep Ridge Road to the Uintah County Middle Road then by existing or planned oil field development roads to within 0.10 miles of the site, which will require new construction.

The general area is in the head of a long unnamed wash immediately west of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles below the site. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws which drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimed with steep side hills, which have exposed sand stone bedrock cliffs along the rims.

The proposed NBU 732-36E gas well location lies longitudinally along the slope of a sandy flat which has a gentle slope to the northeast. Cut from the upper side will be moved to the east to form the pad. No drainage concerns exist. The selected site poses no significant surface problems and should be a suitable location for constructing a pad, drilling and operating a well..

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA attended the pre-site visit and had no concerns regarding the proposal.

Ben Williams of the Utah Division of Wildlife Resources was invited to the pre-site visit. He did not attend.

SITLA is to be contacted for site restoration requirements including the seed mix to be used in revegetation.

Floyd Bartlett  
Onsite Evaluator

7/22/2008  
Date / Time

# Application for Permit to Drill Statement of Basis

12/24/2008

Utah Division of Oil, Gas and Mining

Page 2

## Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

## **ON-SITE PREDRILL EVALUATION**

### **Utah Division of Oil, Gas and Mining**

<b>Operator</b>	EOG RESOURCES, INC.				
<b>Well Name</b>	NBU 732-36E				
<b>API Number</b>	43-047-50060-0		<b>APD No</b>	840	<b>Field/Unit</b> NATURAL BUTTES
<b>Location: 1/4,1/4 SWNW</b>	<b>Sec</b> 36	<b>Tw</b> 9S	<b>Rng</b> 20E	1905 FNL 661 FWL	
<b>GPS Coord (UTM)</b>	617732	4427749	<b>Surface Owner</b>		

#### **Participants**

Floyd Bartlett (DOGM), Jim Davis (SITLA), Byron Tolman (Agent for EOG)

#### **Regional/Local Setting & Topography**

This location is in the Natural Buttes Unit approximately 10 miles southeast of Ouray, Ut.. It is accessed by the Seep Ridge Road to the Uintah County Middle Road then by existing or planned oil field development roads to within 0.10 miles of the site, which will require new construction.

The general area is in the head of a long unnamed wash immediately west of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles below the site. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws which drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims.

The proposed NBU 732-36E gas well location lies longitudinally along the slope of a sandy flat which has a gentle slope to the northeast. Cut from the upper side will be moved to the east. No drainage concerns exist. The selected site poses no significant surface problems and should be a suitable location for constructing a pad, drilling and operating a well..

Both the surface and minerals are owned by SITLA.

#### **Surface Use Plan**

##### **Current Surface Use**

Grazing  
Recreational  
Wildlife Habitat

##### **New Road**

<b>Miles</b>	<b>Well Pad</b>		<b>Src Const Material</b>	<b>Surface Formation</b>
0.1	<b>Width</b> 276	<b>Length</b> 375	Onsite	UNTA

**Ancillary Facilities** N

#### **Waste Management Plan Adequate?**

#### **Environmental Parameters**

**Affected Floodplains and/or Wetland** N

##### **Flora / Fauna**

The area has a moderate cover of vegetation. Principal species present are greasewood, shadscale, horsebrush, cheatgrass, halogeton, globe mallow, Spiny hopsage, Indian ricegrass, pepperweed, prickly pear and wild onions.

Cattle, antelope and small mammals and birds.

### Soil Type and Characteristics

Soils are a moderately shallow sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run?

Paleo Potential Observed?

Cultural Survey Run?

Cultural Resources?

### Reserve Pit

#### Site-Specific Factors

#### Site Ranking

Distance to Groundwater (feet)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)	300 to 1320	10
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)	<10	0
Affected Populations	<10	0
Presence Nearby Utility Conduits	Not Present	0

Final Score

25

1

Sensitivity Level

#### Characteristics / Requirements

The reserve pit is planned in an area of cut in the southwest corner of the location. Dimensions are 75' x 175' x 12' deep with 2' of freeboard. A liner with a minimum thickness of 16 mils. and a felt sub-liner are required.

Closed Loop Mud Required? N

Liner Required? Y

Liner Thickness 16

Pit Underlayment Required? Y

### Other Observations / Comments

AYV's were used to reach the site.

Floyd Bartlett

Evaluator

7/22/2008

Date / Time

**From:** Jim Davis  
**To:** Bonner, Ed; kaylene gardner; Mason, Diana  
**Date:** 8/25/2008 10:52 AM  
**Subject:** SITLA clearance of EOG wells

The following wells have been approved by SITLA including Arch and Paleo clearance. Spot monitoring for paleo resources is required at each of these locations. Formal notice of the paleo requirement has been sent to EOG previously.

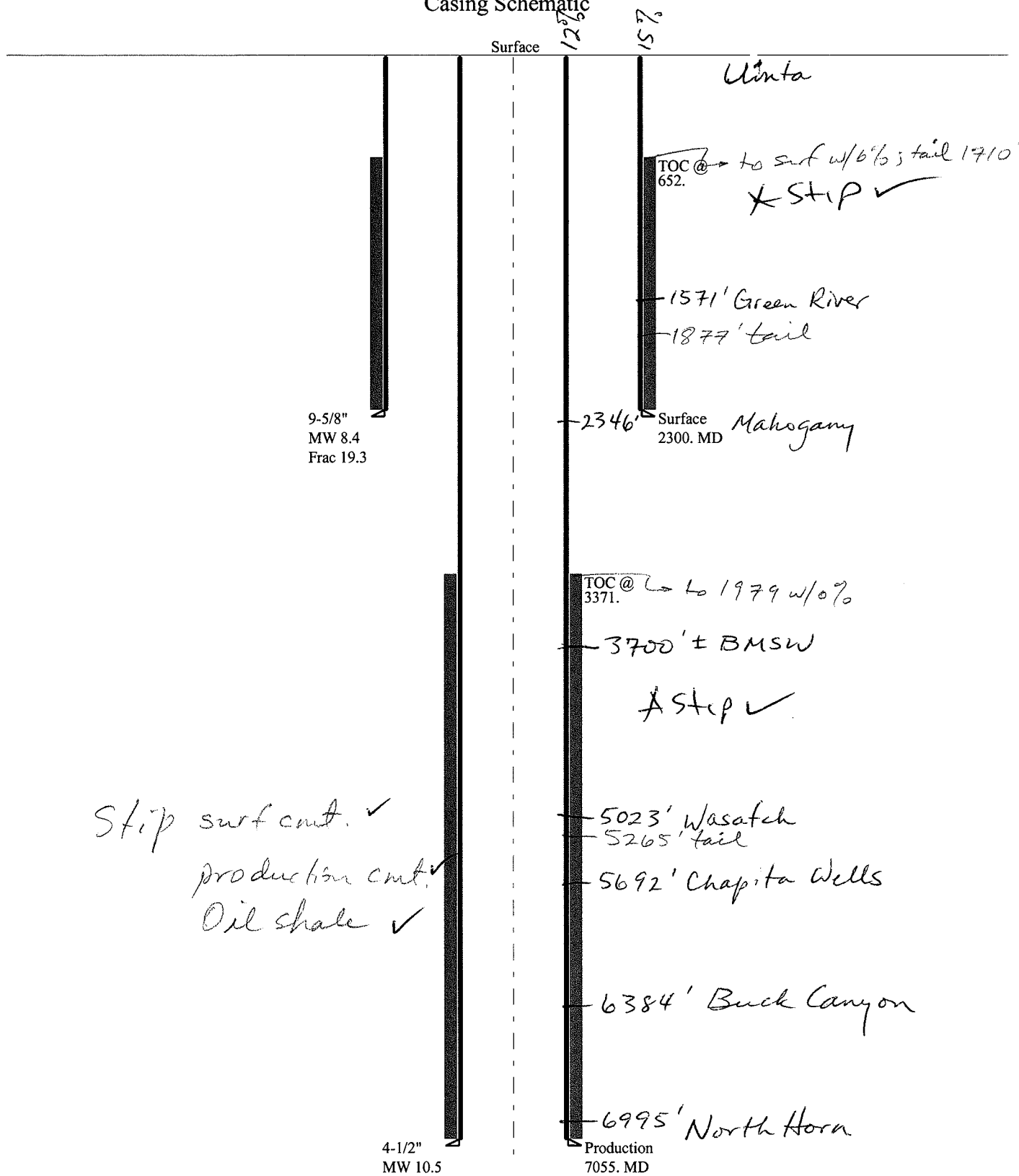
4304750065	NBU 734-36E	EOG Resources	630	Natural Buttes	NENE	36	090S	200E
S	UINTAH							
4304750041	NBU 745-31E	EOG Resources	630	Natural Buttes	SWSW	31	090S	210E
S	UINTAH							
4304750063	NBU 736-36E	EOG Resources	630	Natural Buttes	SENE	36	090S	200E
S	UINTAH							
4304750060	NBU 732-36E	EOG Resources	630	Natural Buttes	SWNW	36	090S	200E
S	UINTAH							
4304750061	NBU 730-36E	EOG Resources	630	Natural Buttes	NWNW	36	090S	200E
S	UINTAH							

-Jim

Jim Davis  
 Utah Trust Lands Administration  
 jimdavis1@utah.gov  
 Phone: (801) 538-5156

43047500600000 NBU 732-36E

Casing Schematic



Well name:	<b>43047500600000 NBU 732-36E</b>	
Operator:	<b>EOG Resources, Inc.</b>	
String type:	Surface	Project ID: 43-047-50060-0000
Location:	Uintah County	

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 97 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 185 ft

Cement top: 652 ft

**Burst**

Max anticipated surface pressure: 2,024 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,300 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 2,014 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 7,055 ft  
Next mud weight: 10.500 ppg  
Next setting BHP: 3,848 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,300 ft  
Injection pressure: 2,300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2300	9.625	36.00	J-55	ST&C	2300	2300	8.796	998.3

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1004	2020	2.013	2300	3520	1.53	83	394	4.76 J

Prepared Helen Sadik-Macdonald  
by: Div of Oil, Gas & Minerals

Phone: 810-538-5357

Date: August 20, 2008  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS: NONE**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Collapse is based on a vertical depth of 2300 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>43047500600000 NBU 732-36E</b>	
Operator:	<b>EOG Resources, Inc.</b>	
String type:	Production	Project ID: 43-047-50060-0000
Location:	Uintah County	

**Design parameters:**

**Collapse**

Mud weight: 10.500 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 164 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 368 ft

Cement top: 3,371 ft

**Burst**

Max anticipated surface pressure: 2,296 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 3,848 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

**Non-directional string.**

Tension is based on air weight.  
Neutral point: 5,948 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	7055	4.5	11.60	N-80	LT&C	7055	7055	3.875	615.7

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3848	6350	1.650	3848	7780	2.02	82	223	2.72 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Minerals

Phone: 810-538-5357

Date: August 20, 2008  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS: NONE**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Collapse is based on a vertical depth of 7055 ft, a mud weight of 10.5 ppg The casing is considered to be evacuated for collapse purposes.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

## BOPE REVIEW

EOG NBU 732-36E API 43-047-50060-0000

### INPUT

Well Name	EOG NBU 732-36E	API 43-047-50060-0000
Casing Size (")	String 1	String 2
Setting Depth (TVD)	9 5/8	4 1/2
Previous Shoe Setting Depth (TVD)	2300	7055
Max Mud Weight (ppg)	60	2300
BOPE Proposed (psi)	8.4	10.5
Casing Internal Yield (psi)	500	5000
Operators Max Anticipated Pressure (psi)	3520	7780
	3852	10.5 ppg

### Calculations

Max BHP [psi]	String 1	String 2
	.052*Setting Depth*MW =	1005
MAASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	729
MAASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	499
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	512
Required Casing/BOPE Test Pressure		2300 psi
*Max Pressure Allowed @ Previous Casing Shoe =		60 psi

BOPE Adequate For Drilling And Setting Casing at Depth?

NO ☒ YES

Air drill - stripper head

\*Can Full Expected Pressure Be Held At Previous Shoe?

NO ☒ YES

Reasonable - No expected pressure

\*Assumes 1psi/ft frac gradient

### Calculations

Max BHP [psi]	String 1	String 2
	.052*Setting Depth*MW =	3852
MAASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	3005
MAASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	2300
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	2806
Required Casing/BOPE Test Pressure		5000 psi
*Max Pressure Allowed @ Previous Casing Shoe =		2300 psi

BOPE Adequate For Drilling And Setting Casing at Depth?

YES ☒ YES

\*Can Full Expected Pressure Be Held At Previous Shoe?

NO ☒ YES

\*Assumes 1psi/ft frac gradient

# **ON-SITE PREDRILL EVALUATION**

## **Utah Division of Oil, Gas and Mining**

<b>Operator</b>	EOG RESOURCES, INC.				
<b>Well Name</b>	NBU 732-36E				
<b>API Number</b>	43047500600000	<b>APD No</b>	840	<b>Field/Unit</b>	NATURAL BUTTES
<b>Location: 1/4,1/4</b>	SWNW	<b>Sec</b>	36	<b>Tw</b>	9.0S
		<b>Rng</b>	20.0E	1905	FNL 661 FWL
<b>GPS Coord (UTM)</b>	617732	4427749	<b>Surface Owner</b>		

### **Participants**

Floyd Bartlett (DOGM), Jim Davis (SITLA), Byron Tolman (Agent for EOG)

### **Regional/Local Setting & Topography**

This location is in the Natural Buttes Unit approximately 10 miles southeast of Ouray, Ut.. It is accessed by the Seep Ridge Road to the Uintah County Middle Road then by existing or planned oil field development roads to within 0.10 miles of the site, which will require new construction.

The general area is in the head of a long unnamed wash immediately west of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles below the site. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws which drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims.

The proposed NBU 732-36E gas well location lies longitudinally along the slope of a sandy flat which has a gentle slope to the northeast. Cut from the upper side will be moved to the east. No drainage concerns exist. The selected site poses no significant surface problems and should be a suitable location for constructing a pad, drilling and operating a well..

Both the surface and minerals are owned by SITLA.

### **Surface Use Plan**

#### **Current Surface Use**

Grazing  
Recreational  
Wildlife Habitat

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0.1	<b>Width</b> 276 <b>Length</b> 375	Onsite	UNTA

**Ancillary Facilities** N

### **Waste Management Plan Adequate?**

### **Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

The area has a moderate cover of vegetation. Principal species present are greasewood, shadscale, horsebrush, cheatgrass, halogeton, globe mallow, Spiny hopsage, Indian ricegrass, pepperweed, prickly pear and wild onions.

Cattle, antelope and small mammals and birds.

#### Soil Type and Characteristics

Soils are a moderately shallow sandy loam.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

**Paleo Survey Run?** **Paleo Potential Observed?** **Cultural Survey Run?** **Cultural Resources?**

#### Reserve Pit

##### Site-Specific Factors

##### Site Ranking

<b>Distance to Groundwater (feet)</b>	>200	0
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>	300 to 1320	10
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>	25	1 Sensitivity Level

##### Characteristics / Requirements

The reserve pit is planned in an area of cut in the southwest corner of the location. Dimensions are 75' x 175' x 12' deep with 2' of freeboard. A liner with a minimum thickness of 16 mils. and a felt sub-liner are required.

**Closed Loop Mud Required?** N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y

#### Other Observations / Comments

AYV's were used to reach the site.

Floyd Bartlett  
Evaluator

7/22/2008  
Date / Time

# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 6/25/2008

**API NO. ASSIGNED:** 43047500600000

**WELL NAME:** NBU 732-36E

**OPERATOR:** EOG Resources, Inc. (N9550)

**PHONE NUMBER:** 435 781-9111

**CONTACT:** Kaylene Gardner

**PROPOSED LOCATION:** SWNW 36 090S 200E

**Permit Tech Review:** ☒

**SURFACE:** 1905 FNL 0661 FWL

**Engineering Review:** ☒

**BOTTOM:** 1905 FNL 0661 FWL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 39.99349

**LONGITUDE:** -109.62102

**UTM SURF EASTINGS:** 617726.00

**NORTHINGS:** 4427736.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** ML-3140.5

**PROPOSED FORMATION:** NHORN

**SURFACE OWNER:** 3 - State

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** STATE/FEE - 6196017

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** 49-225

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☐ **Intent to Commingle**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** 173-14

**Effective Date:** 12/2/1999

**Siting:** 460' fr u bdry & uncomm. tract

☐ **R649-3-11. Directional Drill**

**Comments:** Presite Completed  
APD IS APRVD IN U/POD:

**Stipulations:** 5 - Statement of Basis - bhill  
13 - Cement Volume Formation (3a) - hmacdonald  
17 - Oil Shale 190-5(b) - dmason  
25 - Surface Casing - hmacdonald



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 732-36E  
**API Well Number:** 43047500600000  
**Lease Number:** ML-3140.5  
**Surface Owner:** STATE  
**Approval Date:** 12/24/2008

**Issued to:**

EOG Resources, Inc., 1060 East Highway 40, Vernal, UT 84078

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of 173-14.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Cement volume for the 4 1/2 production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 2100' MD in order to raise cement level to 200' above the surface casing shoe.

Surface casing shall be cemented to the surface.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact

Dustin Doucet

- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office  
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office  
(801) 733-0983 home

**Reporting Requirements:**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**Approved By:**

A handwritten signature in black ink, appearing to read 'Gil Hunt', with a stylized flourish at the end.

For Gil Hunt  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-3140.5			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>			
<b>2. NAME OF OPERATOR:</b> EOG Resources, Inc.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> 1060 East Highway 40 , Vernal, UT, 84078		<b>8. WELL NAME and NUMBER:</b> NBU 732-36E			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1905 FNL 0661 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047500600000			
<b>PHONE NUMBER:</b> 435 781-9111 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/14/2009  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> APD EXTENSION            OTHER: _____         </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> EOG Resources, Inc. respectfully requests the APD for the referenced well be extended for one year.					
<b>Approved by the Utah Division of Oil, Gas and Mining</b>					
<b>Date:</b> <u>December 15, 2009</u>					
<b>By:</b>					
<b>NAME (PLEASE PRINT)</b> Mickenzie Gates	<b>PHONE NUMBER</b> 435 781-9145	<b>TITLE</b> Operations Clerk			
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/14/2009				

**RECEIVED** December 14, 2009



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047500600000

**API:** 43047500600000

**Well Name:** NBU 732-36E

**Location:** 1905 FNL 0661 FWL QTR SWNW SEC 36 TWNP 090S RNG 200E MER S

**Company Permit Issued to:** EOG RESOURCES, INC.

**Date Original Permit Issued:** 12/24/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Mickenzie Gates

**Date:** 12/14/2009

**Title:** Operations Clerk **Representing:** EOG RESOURCES, INC.

**Date:** December 15, 2009

**By:** 

**RECEIVED** December 14, 2009

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 732-36E
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1905 FNL 0661 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047500600000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH
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<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	OTHER: <input style="width: 100px;" type="text"/>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
<b>Approved by the Utah Division of Oil, Gas and Mining</b>  <b>Date:</b> 12/23/2010 <b>By:</b>		
<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 12/20/2010



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

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- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Approved by the  
Utah Division of  
Oil, Gas and Mining

**Signature:** Danielle Piernot

**Date:** 12/20/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE,

**Date:** 12/23/2010

**By:** 

**RECEIVED** December 20, 2010



GARY R. HERBERT  
Governor

GREG BELL  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

JANUARY 4, 2012

Kerr McGee Oil & Gas Onshore, L.P.  
P.O. Box 173779  
Denver, CO 80217

Re: APD Rescinded – NBU 732-36E, Sec. 36, T. 9S, R. 20E  
Uintah County, Utah API No. 43-047-50060


Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 24, 2008. On December 15, 2009 and December 23, 2010, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective January 4, 2012.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
SITLA, Ed Bonner

